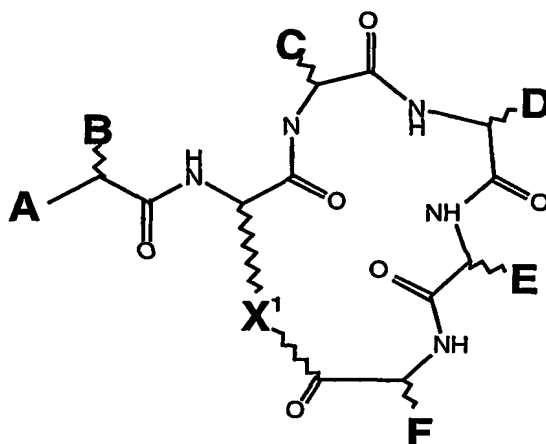


CLAIMS

1. A method of treatment of osteoarthritis,
comprising the step of administering an effective amount
5 of an inhibitor of a G protein-coupled receptor to a
subject in need of such treatment.

2. A method according to claim 1, in which the
inhibitor is a compound which

- (a) is an antagonist of a G protein-coupled receptor,
10 (b) has substantially no agonist activity, and
(c) is a cyclic peptide or peptidomimetic compound of
formula I



15 where A is H, alkyl, aryl, NH₂, NH-alkyl,
N(alkyl)₂, NH-aryl, NH-acyl, NH-benzoyl, NHSO₃, NHSO₂-
alkyl, NHSO₂-aryl, OH, O-alkyl, or O-aryl;

20 B is an alkyl, aryl, phenyl, benzyl, naphthyl or
indole group, or the side chain of a D- or L-amino acid,
but is not the side chain of glycine, D-phenylalanine, L-
homophenylalanine, L-tryptophan, L-homotryptophan, L-
tyrosine, or L-homotyrosine;

25 C is the side chain of a D-, L- or homo-amino
acid, but is not the side chain of isoleucine,
phenylalanine, or cyclohexylalanine;

D is the side chain of a neutral D-amino acid,
but is not the side chain of glycine or D-alanine, a bulky

planar side chain, or a bulky charged side chain;

E is a bulky substituent, but is not the side chain of D-tryptophan, L-N-methyltryptophan, L-homophenylalanine, L-2-naphthyl L-tetrahydroisoquinoline,
5 L-cyclohexylalanine, D-leucine, L-fluorenylalanine, or L-histidine;

F is the side chain of L-arginine, L-homoarginine, L-citrulline, or L-canavanine, or a bioisostere thereof; and

10 X is $-(CH_2)_nNH-$ or $(CH_2)_nS-$, where n is an integer of from 1 to 4; $-(CH_2)_2O-$; $-(CH_2)_3O-$; $-(CH_2)_3-$; $-(CH_2)_4-$; $-CH_2COCHRNH-$; or $-CH_2-CHCOCHRNH-$, where R is the side chain of any common or uncommon amino acid.

3. A method according to claim 2, in which n is 2 or

15 3.

4. A method according to claim 2 or claim 3, in which A is an acetamide group, an aminomethyl group, or a substituted or unsubstituted sulphonamide group.

5. A method according to claim 3, in which A is a
20 substituted sulphonamide, and the substituent is an alkyl chain of 1 to 6 carbon atoms, or a phenyl or tolyl group.

6. A method according to claim 5, in which the substituent is an alkyl chain of 1 to 4 carbon atoms.

7. A method according to any one of claims 2 to 6,
25 in which B is the side chain of L-phenylalanine or L-phenylglycine.

8. A method according to any one of claims 2 to 7, in which C is the side chain of glycine, alanine, leucine, valine, proline, hydroxyproline, or thioproline.

30 9. A method according to any one of claims 2 to 8, in which D is the side chain of D-Leucine, D-homoleucine, D-cyclohexylalanine, D-homocyclohexylalanine, D-valine, D-norleucine, D-homo-norleucine, D-phenylalanine, D-tetrahydroisoquinoline, D-glutamine, D-glutamate, or D-
35 tyrosine.

10. A method according to any one of claims 2 to 9, in which E is the side chain of an amino acid selected

from the group consisting of L-phenylalanine, L-tryptophan and L-homotryptophan, or is L-1-naphthyl or L-3-benzothienyl alanine.

11. A method according to any one of claims 1 to 10,
5 in which the inhibitor is a compound which has antagonist activity against C5aR, and has no C5a agonist activity.
12. A method according to any one of claims 1 to 11, in which the inhibitor has potent antagonist activity at sub-micromolar concentrations.
- 10 13. A method according to any one of claims 1 to 12, in which the compound has a receptor affinity $IC_{50} < 25\mu M$, and an antagonist potency $IC_{50} < 1\mu M$.
14. A method according to any one of claims 1 to 13, in which the compound is selected from the group
15 consisting of compounds 1 to 6, 10 to 15, 17, 19, 20, 22, 25, 26, 28, 30, 31, 33 to 37, 39 to 45, 47 to 50, 52 to 58 and 60 to 70 described in PCT/AU02/01427.
15. A method according to claim 14, in which the compound is PMX53 (compound 1), compound 33, compound 60
20 or compound 45 described in PCT/AU02/01427.
16. A method according to any one of claims 1 to 15, in which the inhibitor is used in conjunction with one or more other agents for the treatment of osteoarthritis.
17. Use of a compound as defined in any one of claims
25 1 to 15 in the manufacture of a medicament for the treatment of osteoarthritis.